WHAT IS CLAIMED IS:

1. An optical recording medium comprising:

a recording layer, in which information is recorded in a three–dimensional manner in an in–plane direction and a thickness direction of the recording layer;

wherein the recording layer comprises a thermochromic material whose color changes reversibly according to a temperature, and

the thermochromic material converts absorbed light into heat and increases its light absorptance as the temperature rises.

2. The optical recording medium according to claim 1, wherein the thermochromic material changes irreversibly to a translucent substance whose color does not change according to a temperature change, when the temperature reaches a first predetermined temperature or higher.

3. The optical recording medium according to claim 1, wherein the thermochromic material has a light absorptance that is constant at a temperature lower than a second predetermined temperature and increases as the temperature rises at the second predetermined temperature or higher.

4. The optical recording medium according to claim 1, wherein the recording layer is divided into a plurality of recording sublayers by a separating film formed of a translucent material.

5. The optical recording medium according to claim 4, wherein a refractive index of the translucent material is different from that of the thermochromic material.

6. The optical recording medium according to claim 1, wherein the recording layer has unevenness on its surface.

7. The optical recording medium according to claim 1, wherein a reflecting film is provided on a surface opposite to a light incident side of the recording layer.

8. An optical information processing apparatus comprising:

an optical recording medium comprising

a recording layer comprising a thermochromic material whose color changes reversibly according to a temperature,

wherein the thermochromic material has a property of converting absorbed light into heat and increasing its light absorptance as the temperature rises, and

information is recorded in a three–dimensional manner in an in–plane direction and a thickness direction of the recording layer;

a radiation light source;

a focusing optical system for focusing light emitted from the radiation light source onto a minute spot on the optical recording medium; and

a photodetector for receiving the light transmitted or reflected by the optical recording medium and outputting a reproducing signal.

9. The optical information processing apparatus according to claim 8, wherein the thermochromic material changes irreversibly to a translucent substance whose color does not change according to a temperature change, when the temperature reaches a first predetermined temperature or higher.

10. The optical information processing apparatus according to claim 8, wherein the thermochromic material has a light absorptance that is constant at a temperature lower than a second predetermined temperature and increases as the temperature rises at the second predetermined temperature or higher.

11. The optical information processing apparatus according to claim 8, further comprising a control portion for controlling an intensity of the light emitted from the radiation light source so that an amplitude of the reproducing signal is at a maximum.

12. The optical information processing apparatus according to claim 8, further comprising a control portion for detecting a high–frequency signal component, which is a signal component whose frequency is high, in the reproducing signal and controlling an intensity of the light emitted from the

radiation light source so that an amplitude of the high-frequency signal component is at a maximum.

13. The optical information processing apparatus according to claim 8, further comprising a control portion for controlling an intensity of the light emitted from the radiation light source so that a region of the recording layer whose color is changed by irradiation of the light emitted from the radiation light source is smaller than the minute spot.

14. The optical information processing apparatus according to claim 8, wherein the recording layer is divided into a plurality of recording sublayers by a separating film formed of a translucent material.

15. The optical information processing apparatus according to claim 14, wherein a refractive index of the translucent material is different from that of the thermochromic material.

16. The optical information processing apparatus according to claim 8, wherein a position where the minute spot is formed in the recording layer is detected by the light reflected by a surface of the recording layer.

17. The optical information processing apparatus according to claim 8, wherein unevenness is provided on a surface of the recording layer, and a position where the minute spot is formed is detected based on a position of the unevenness.

18. An optical recording and reproducing method, the method for performing recording and reproducing with respect to an optical recording medium comprising

a recording layer comprising a thermochromic material whose color changes reversibly according to a temperature,

wherein the thermochromic material has a property of converting absorbed light into heat and increasing its light absorptance as the temperature rises, and

information is recorded in a three-dimensional manner in an in-plane direction and a thickness direction of the recording layer;

wherein the information is recorded in and reproduced from the

recording layer by irradiating converged light at a predetermined position in the recording layer and raising a temperature of the predetermined position.

19. The optical recording and reproducing method according to claim 18, wherein the thermochromic material changes irreversibly to a translucent substance whose color does not change according to a temperature change, when the temperature reaches a first predetermined temperature or higher.

20. The optical recording and reproducing method according to claim 18, wherein the thermochromic material has a light absorptance that is constant at a temperature lower than a second predetermined temperature and increases as the temperature rises at the second predetermined temperature or higher.

21. The optical recording and reproducing method according to claim 18, wherein the information is reproduced from the recording layer by detecting a light transmittance or a light reflectance at the predetermined position in the recording layer.

22. The optical recording and reproducing method according to claim 18, wherein the information is recorded in the recording layer by irradiating the converged light at the predetermined position in the recording layer and raising the temperature of the predetermined position to the first predetermined temperature or higher.

23. The optical recording and reproducing method according to claim 18, wherein an intensity of the converged light is controlled so that an amplitude of an obtained reproducing signal is at a maximum.

24. The optical recording and reproducing method according to claim 18, wherein an intensity of the converged light is controlled so that a region of the recording layer whose color is changed by irradiation of the converged light is smaller than a focusing spot of the converged light.

25. The optical recording and reproducing method according to claim 18, wherein the recording layer is divided into a plurality of recording sublayers by a separating film formed of a translucent material.

26. The optical recording and reproducing method according to claim 25, wherein a refractive index of the translucent material is different from that of the thermochromic material.

27. The optical recording and reproducing method according to claim 18, wherein a position where a focusing spot of the converged light is formed in the recording layer is detected by light reflected by a surface of the recording layer.

28. The optical recording and reproducing method according to claim 18, wherein unevenness is provided on a surface of the recording layer, and a position where a focusing spot of the converged light is formed is detected based on a position of the unevenness.